

## **REMARKS**

By the present amendment, features recited in claim 28 have now been recited in independent claims 1, 13 and 24, with claims 7, 10-12, 18-23 and 27 being canceled without prejudice or disclaimer of the subject matter thereof.

Applicants note that with respect to the Examiner's request for an indication of whether the term "ReaLook" is a trademark or not, it appears that such is based upon the Examiner's rejection of claim 27. Since claim 27 which stands rejected under 35 U.S.C. §112, first paragraph and over cited art, has been canceled by the present amendment, applicants consider it unnecessary to respond to the Examiner's request, and applicants note that the rejection of claim 27 under 35 U.S.C. §112, first paragraph, and over the cited art should now be overcome.

According to the present invention, as recited in the claims as amended, the screen, upon which a modulated light is expandingly projected from a picture display device having pixels aligned in a matrix (for example, a fixed pixel display device, such as, a liquid crystal panel, and a digital micro-mirror device, etc.), is characterized by a structure for reducing the "moiré" effect. Thus, the claims of the present invention provide that the pitch of the light absorbing layers and the pitch of the Fresnel lenses are determined as below, with respect to the pitch of pixels of the image display device, which is enlarged and projected on the screen:

(1) the pitch of the light absorbing layers (i.e., the pitch of the horizontal lenticular lenses) is made to be smaller than the pixel pitch in the horizontal direction of the image produced by the picture display device, which is enlarged and projected on the screen; and

(2) the pitch of the Fresnel lens is made to be smaller than 1/2 of the pixel pitch in the vertical direction of the same image produced by the picture display device (i.e., the pixel pitch in the vertical direction of the image display device is at least 2 times of the pitch of the Fresnel lens).

With the determination of the pitches of the lenticular lens and the Fresnel lens such that the above two (1 and 2) conditions are satisfied, as recited in independent claims 1, 13, 24 and 28 and the dependent claims, it is possible to reduce the “moiré” appropriately, even in the case of adopting a fixed pixel display device as mentioned above as the image display device.

Applicants note that the feature of a pitch in a vertical direction of the pixels projected and enlarged on said screen from said image produced by said picture display device is at least twice of a pitch of said Fresnel lenses formed on said Fresnel lens sheet” (emphasis added) as now recited in claim 1 is supported by the description of the specification, in particular, the portion starting “In addition, ... at least two” from page 38, line 25 to page 39, line 3, while the feature regarding the pitch in the horizontal direction, as now recited in claim 1, is supported by the description at page 38, lines 9-24 of the specification, for example. Applicants submit that the aforementioned recited features are not disclosed or taught in the cited art as will become more apparent from the following discussion.

The rejection of claims 1-5, 7, 11, 13-14, 16, 18-19, 21, 23-24 and 26 under 35 U.S.C. 103(a) as being unpatentable over Park (U.S. Patent No. 6,061,178) in view of Yamaguchi (U.S. Patent No. 6,185,038) and further in view of Mitani (U.S. Patent No. 5,815,313) or Ichikawa (U.S. Patent No. 4,988,164); the rejection of claims 12 and 22 under 35 U.S.C. 103(a) as being unpatentable over Park (U.S. Patent No. 6,061,178) in view of Yamaguchi (U.S. Patent No. 6,185,038) and further in view of Mitani (U.S. Patent No. 5,815,313) or Ichikawa (U.S. Patent No. 4,988,164); the rejection of claims 1-5, 7, 10-11, 13-16, 18-21, 23-24 and 26 under 35 U.S.C. 103(a) as being unpatentable over Saitoh (U.S. Patent No. 5,870,224) in view of Yamaguchi (U.S. Patent No. 6,185,038); the rejection of claims 6, 12, 17, 22 and 25 under 35 U.S.C. 103(a) as being unpatentable over Saitoh (U.S. Patent No. 5,870,224) in view of Yamaguchi (U.S. Patent No. 6,185,038); the rejection of claim

27 under 35 U.S.C. 103(a) as being unpatentable over Saitoh (U.S. Patent No. 5,870,224) in view of Yamaguchi (U.S. Patent No. 6,185,038) and further in view of Applicant's admitted prior art (AAPA) or Oi (U.S. Patent No. 5,804,102); and the rejection of claim 28 under 35 U.S.C. 103(a) as being unpatentable over Saitoh (U.S. Patent No. 5,870,224) in view of Yamaguchi (U.S. Patent No. 6,185,038) and further in view of Nijima (JP 3-168630); such rejections are traversed insofar as they are applicable to the present claims, and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 U.S.C. 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under §103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for

providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Applicants note that in each of the rejections as set forth by the Examiner, the Examiner has recognized the deficiency of the primary reference of Park or Saitoh in relation to the claimed invention and has utilized the patent to Yamaguchi in an attempt to overcome the recognized deficiency of the cited art. That is, the Examiner has indicated that Park teaches the salient features of the claimed invention except for having the pitch of the lenticular sheet smaller than the pitch of the pixels projected. Likewise, the Examiner has indicated that Saitoh teaches the salient features of the claimed invention except for having the pitch of the lenticular sheet smaller than the pitch of the pixels projected. The Examiner cites Yamaguchi in an attempt to overcome such deficiencies of the cited art indicating that Yamaguchi teaches in col. 3, lines 35-44 and col. 19, line 53, of setting the pitch of the interference lines of the interfering sources to about equal 2 or less than the pitch of pixels projected. The Examiner thus contends that "It would have been obvious at the time the invention was made for one of ordinary skill in the art to include the features taught by Yamaguchi for the purpose of reducing/eliminating moiré interference" (emphasis added). Moreover, with respect to claim 28, the Examiner recognizes that Saitoh in view of Yamaguchi teaches the salient features of the claimed invention except for the pitch of the Fresnel lenses being at most 1/2 the pitch of the pixels projected. The Examiner contends that Nijima teaches in column

the constitution section as well as Fig. 2 that it was known to utilize the screen or the projected pixel pitch P1 is at least 3 times (which is greater than twice) the pitch of the Fresnel lens pitch. The Examiner thus concludes that "It would have been obvious to one ordinary skill in the art at the time the invention was made to utilize the features as taught by Nijima for the purpose of reducing/eliminating moiré." (emphasis added)

Applicants submit that the Examiner's position concerning the disclosure of Yamaguchi and Nijima in relation to the claimed invention is incorrect and based upon a misunderstanding of the disclosure thereof. Thus, applicants submit that neither Yamaguchi nor Nijima taken alone or in any combination thereof with the other cited art provides the claimed features as set forth in independent claims 1, 13, 24 and 28 and the dependent claims of this application in the sense of 35 U.S.C. 103. Applicants submit that with regard to the Examiner's contentions concerning missing features and that it would be obvious to provide such features as a matter of routine skill in the art, this position represents the principle "obvious to try" which is not standard of the 35 U.S.C. 103. See In re Fine, supra and In re Lee, supra. Applicants further note that the other cited art to Mitani and Ichikawa, as recognized by the Examiner, do not provide the claimed features as now recited in the independent claims and whether or not such cited art provides the features contended to be present therein by the Examiner, such cited art fails to provide the features recognized by the Examiner as being absent in the primary references and also fails to provide the features as now recited in the independent claims.

Turning first to Yamaguchi, irrespective of the Examiner's contentions concerning the disclosure in col. 3, lines 35-44 and col. 19, line 53 of this patent, assuming arguendo that such disclosure may be considered to relate to the recited feature of each of the independent claims concerning condition (1) as discussed above with regard to the pitch of the light absorbing layers is smaller than the pixel

pitch in the horizontal direction, applicants submit that there is no disclosure or teaching in the sense of 35 U.S.C. 103 in Yamaguchi of condition (2) as described above of the relationship between the pixel pitch in the vertical direction and the pitch of the Fresnel lenses. That is, Yamaguchi taken alone or in combination with any of the other cited art fails to disclose or teach the feature as recited in claim 1 of "a pitch in a vertical direction of the pixels projected and enlarged on said screen from said image produced by said picture display device is at least twice of the pitch of said Fresnel lenses formed on said Fresnel lens sheet" which feature is recited in each of the other independent claims 13, 24 and 28. With this construction, as claimed, it is possible to reduce the "moiré" appearing due to the interference between the pixel pitch in the vertical direction of the image display device and the Fresnel lenses of the Fresnel lens sheet. Accordingly, applicants submit that all claims patentably distinguish over the cited art in combination with Yamaguchi in the sense of 35 U.S.C. 103 and all claims should be considered allowable thereover.

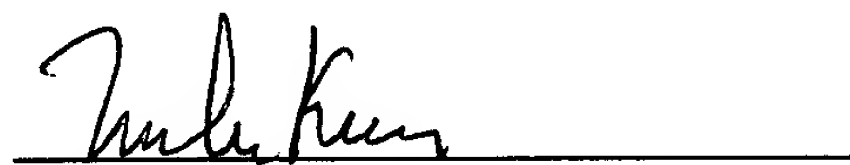
With respect to Niijima, as noted above, the Examiner has recognized that the combination of Saitoh and likewise the combination of Park with Yamaguchi fails to teach "the pitch of the Fresnel lenses being at most 1/2 the pitch of the pixels projected". The Examiner contends that such feature is disclosed in Niijima. Applicants note that only an English language abstract and constitution has been provided, and applicants submit that Niijima fails to disclose the claimed features in relation to the vertical direction as now recited in independent claims 1, 13, 24 and 28. Applicants submit that Niijima discloses, in particular in Fig. 1, that the pitch P2 of the Fresnel lens is made to be smaller than 1/3.3 time of the pitch of the pixel projected on the screen. However, Niijima describes that "...the projection light is dispersed in the horizontal direction..." (emphasis added), in relation to the lenticular lens 22, (in lines 13 to 15 on the right-lower column of page 2 of Niijima). Thus, Fig. 1 of Niijima is a view of showing the horizontal directional cross-section of the screen

from above (or below), and therefore the pitch P1 of the projected pixels shown in this Fig. 1 is only the pixel pitch in the horizontal direction, and not the vertical direction. Namely, Nijima discloses therein the relationship between the pitch in the horizontal direction of the projected pixels and the pitch of the Fresnel lens, but Nijima fails to disclose or teach the relationship between the pitch in the vertical direction of the projected pixels and the pitch of the Fresnel lenses, as recited in each of the independent claims of this application. Thus, applicants submit that Nijima taken alone or in combination with the other cited art fails to achieve such an effect, i.e., reducing the "moiré" effect in the vertical direction. Accordingly, applicants submit that all claims patentably distinguish over the cited art in the sense of 35 U.S.C. 103 and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that each of the independent claims of this application, i.e., claims 1, 13, 24 and 28 and therewith the dependent claims, patentably distinguish over the cited art in the sense of 35 U.S.C. 103, noting that the dependent claims recite additional features, recognized by the Examiner as not being present in the cited art, such that all claims should now be in condition for allowance. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (520.37710CX1) and please credit any excess fees to such deposit account.

Respectfully submitted,



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